



Title	長崎県男女群島で採集された恙虫の1新種
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Citation	熱帶医学 Tropical medicine 21(2). p57-62, 1979
Issue Date	1979-08-31
URL	<a href="http://hdl.handle.net/10069/4252">http://hdl.handle.net/10069/4252</a>
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A new species of Trombiculid mite collected  
in Danjo Islands, Nagasaki Prefecture, Japan  
(Prostigmata: Trombiculidae)\*

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**Abstract :** Reported here is *Walchia (Ripiaspichia) hayashii*, a new species of trombiculid mite. The new species closely resembles to *Ripiaspichia sawaii* Suzuki, 1975 but is obviously different from it in pyriformed sensillae of the scutum, nude seta of the palpotibial dorsal portion in the palpal formula and no specialized seta at the genuala of the second and third legs.

#### INTRODUCTION

A survey on sanitary vermins was undertaken from the 12th to the 17th of May 1978, on the islands of Meshima ( $1.4\text{km}^2$ ) and Oshima ( $2.7\text{km}^2$ ) of the Danjo Islands located at north latitude  $31^{\circ}51' - 32^{\circ}3'$  and east longitude  $128^{\circ}20' - 128^{\circ}25'$ , about 95km south southwest of Fukue of Goto Islands of Nagasaki Prefecture. Trombiculid mites were collected from the soil of nest tunnels of Streaked shearwaters, *Colonectris leucomelas* and two Black-rats, *Rattus rattus* (collected by Dr. Mogi, M.).

Of the mites collected, those belonging to subgenus *Ripiaspichia* have been identified as a new species. This subgenus originated in North America is also distributed in South East Asia, and mainly parasitized to the rodent.

*R. sawaii* in Amami-oshima is the only recorded species of the subgenus in Japan. Characteristics of the subgenus are having three palpotibial claws, five palpotarsal pilous formula and no eyes. It also has characteristic projecting roundness in the rear part of the scutum.

*Walchia (Ripiaspichia) hayashii* Suzuki, n. sp. [Fig. 2. A-G]

**Diagnosis of larva :** This species similar to *R. sawaii* Suzuki, 1975 [Fig. 3. A-G] but easily separable from it in pyriformed sensillae of the scutum, nude seta of the palpotibial dorsal portion in the palpal formula and no nude seta at the genuala of the second and third legs. Near *R. americana* (Ewing, 1942) and *R. mima* (Traub and Evans, 1957), but separable by having 2 setae on coxa III (n. sp. have one seta) and also separable in that the palpal formula is in *mima* b/N/bNN (n. sp. N/N/NNN).

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\* This study was supported by the research grant of Ministry of Education of Japan, in 1978.  
Contribution No. 888 from the Institute for Tropical Medicine, Nagasaki University.  
Received for publication, July 4, 1979.

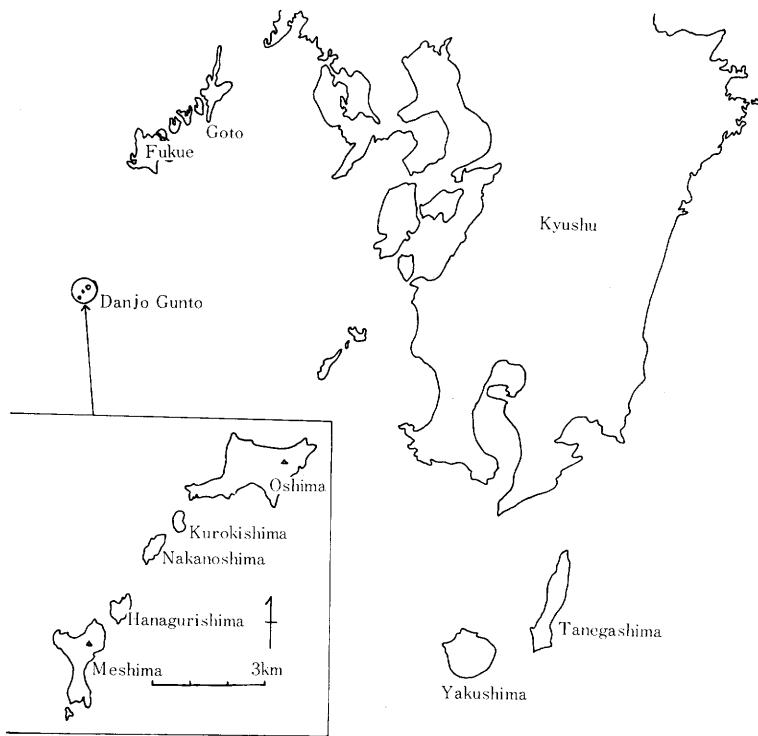


Fig. 1. Map of Danjo-Gunto, Nagasaki Prefecture.

**Description of holotype larva :** Body color white. Very small, measuring  $120\mu\text{m} \times 110\mu\text{m}$  when unengorged. Body longer than wide, no eye lenses.

**Gnathosome :** Palpotarsal pilous formula 5B. Palpal formula N/N/NNN. Palpotibial claw 3-pronged and middle prong the longest. Galeal seta nude. Chelicera bears a row of short teeth of which three, behind the tricuspid cup.

**Scutum :** With large broadly and deeply rounded posterior margin straight. Usual scutal setae rather slender, with tiny hairs. BS inserted at level slightly closer to PLs than ALs. Sensilla pyriform and swollen portion with many sharp hairs, stem bare. am seta absent. Scutal measurements as in Table 1.

Table 1. Standard measurements of *Walchia (Ripiaspichia) hayashii* n. sp. (in micra)

	AW	PW	SB	AP	ASB	PSB	SD	al	pl	s	AS	PS	pp-ss	pp	hm	dsp	vsa
Holotype	36	59	35	27	14	48	62	26	25	29	13	16	+ 9	35	30	24	23
Mean of 10	38	59	34	27	15	43	58	26	25	30	13	17	+13	33	29	25	22
Range	35-42	55-63	30-35	25-28	14-16	40-48	53-62	25-27	25-28	28-34	13	15-19	+9-13	30-35	28-30	23-26	20-23

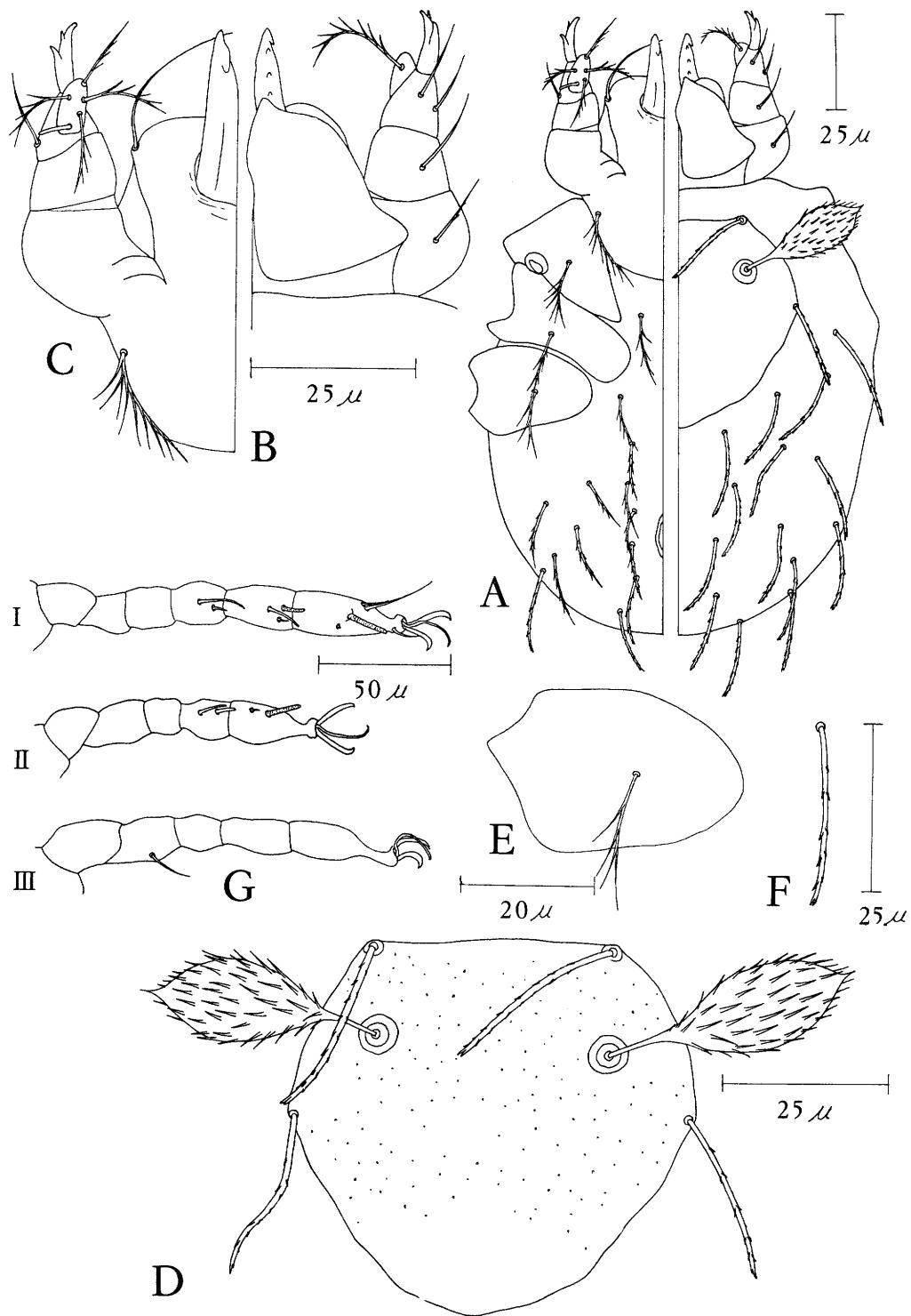


Fig. 2. *Walchia (Ripiaspichia) hayashii* Suzuki n. sp. A. unengorged larva, left ventral, right dorsal; B. gnathosome, dorsal; C. gnathosome, ventral; D. scutum; E. coxa III; F. humeral seta; G. leg with specialized setae.

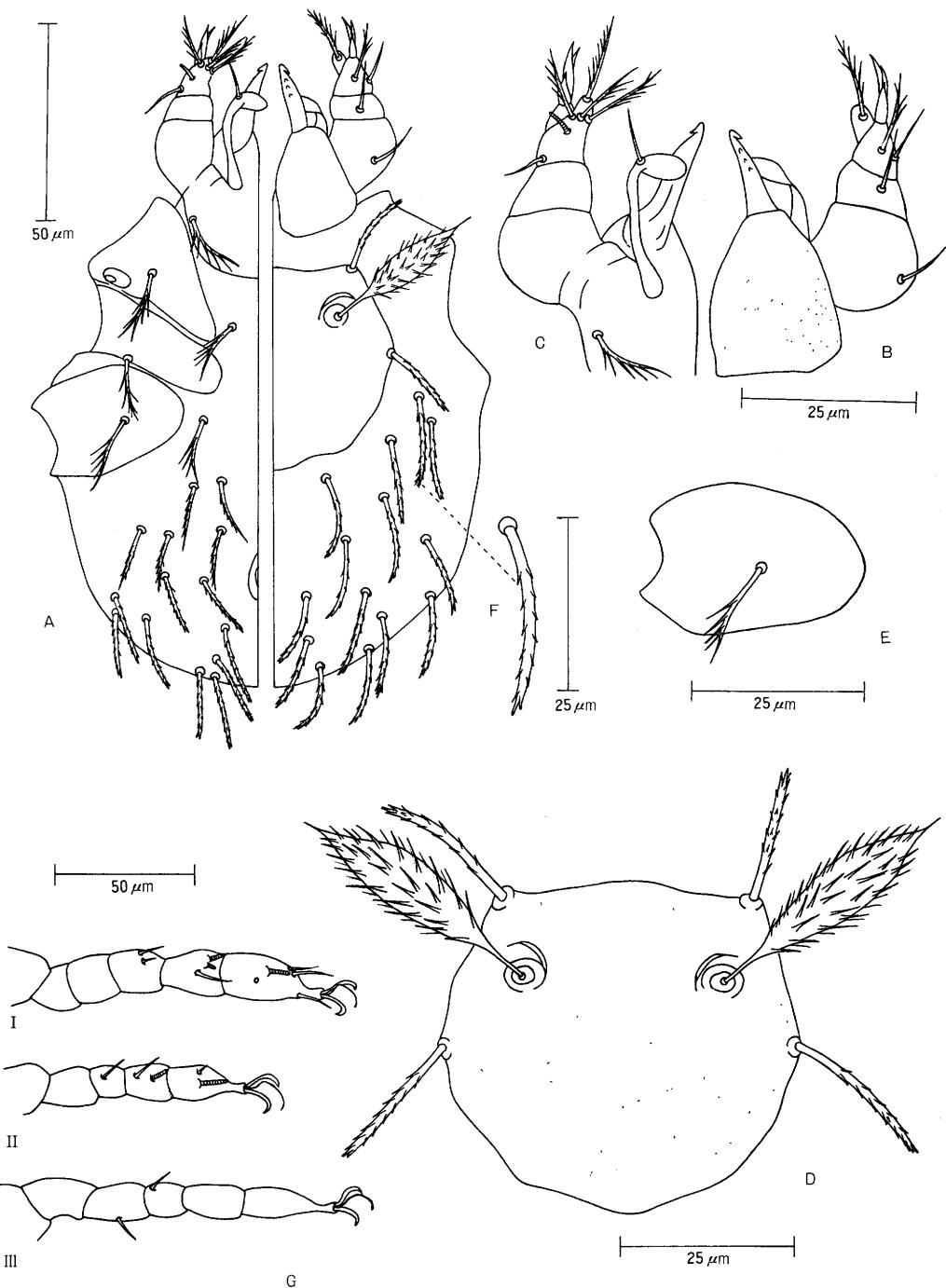


Fig. 3. *Walchia (Ripiaspichia) sawaii* Suzuki, 1975. A. unengorged larvae, left ventral, right dorsal; B. gnathosome, dorsal; C. gnathosome, ventral; D. scutum; E. coxa III; F. humeral seta; G. leg with specialized setae.

**Body setae** : Dorsal setae resembling scutal setae, total 28 in number, arranged 2-6-6-4-4. Ventral setae 24, 2 pairs of sternal setae.

**Legs** : Leg I, 7-segmented ; leg II and III, 6-segmented, coxal setae 1-1-1 ; Seta of coxa III situated in middle of coxa. Leg I : 170 $\mu$ m long, length of tarsus 42 $\mu$ m ; 1 genuala, 1 microspur, 1 tibiala, 2 tibial spurs, 1 tarsal spur, 1 subterminala, 1 microspur, 1 pretarsala. Leg II : 150 $\mu$ m long, length of tarsus 34 $\mu$ m ; 1 tibiala, 1 tibial spur, 1 tarsal spur, 1 microspur. Leg III : 170 $\mu$ m long, length of tarsus 40 $\mu$ m ; 1 femoralala-like seta.

**Materials studied** : Collected from soil under the nest hole of the Streaked shearwater, *Colonectris leucomelas*. Oshima, Danjo Gunto, Nagasaki Prefecture, Japan, 15 unengorged larvae 12 May 1978, Meshima, Danjo Gunto, Nagasaki Prefecture, Japan, 8 unengorged larvae 13 May 1978.

**Holotype** : Oshima, Danjo Gunto, Nagasaki Prefecture, Japan, 12 May 1978.

**Paratype** : 10 paratypes, Oshima and Meshima, Danjo Gunto, Nagasaki Prefecture, Japan, 12-13 May 1978.

Holotype and 5 paratypes will be deposited in the National Science Museum, Tokyo, Japan and 5 paratypes will be deposited in collections of author.

**Comment** : This new species is dedicated to Dr. Kaoru Hayashi, Director, Department of Virology, Institute for Tropical Medicine, Nagasaki University.

Besides the new species reported above, two members of *Leptotrombidium* (*L.*) *pallidum burnsei* (Sasa *et al.*, 1950) and two members of *Euschoengastia* (*E.*) sp. from soil samples and twenty five members of *L.* (*L.*) *kawamurai* (Fukuzumi *et al.*, 1953) from Black rats were collected, respectively. Also, forty three (43) members of *Ornithodoros* (*A.*) *sawaiii*, Kitaoka *et al.* 1973 of Family *Argasidae* were collected from nest tunnels of Streaked shearwaters.

As a result, trombiculid mites in Danjo Islands have been found to correspond to the trombiculid fauna collected in the Nansei Islands.

It is quite significant in comparison to the trombiculid fauna in the Goto Islands which is similar to that in Kyushu main island but is geographically closer to the Danjo Islands.

*O. sawaiii* collected in this survey were previously reported from nest holes of Streaked shearwaters in an inhabited island near Amami-oshima of the Nansei Islands. The finding of the same blood sucking type mites in the Danjo Islands may indicate interesting mutual characteristics between the two different group islands.

#### ACKNOWLEDGEMENTS

I wish to express my sincere thanks to Dr. K. Hayashi and Dr. Y. Wada of Nagasaki University School of Medicine for their generous encouragement of this survey, and Dr. M. Mogi of Nagasaki University School of Medicine for furnishing trombiculid mites from rats.

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長崎県男女群島で採集された恙虫の1新種

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長崎県男女群島の女島、及び男島において採集した恙虫の1新種 *Walchia (Ripiaspichia) hayashii* を記載した。本種は *Ripiaspichia sawaii* Suzuki, 1975に似るが、背甲板の感覚器が西洋梨型で、触肢毛の脛節背面毛が単条、第二、第三脚膝節に単条毛がない点で区別は容易に出来る。

*Ripiaspichia* 亜属は、北米を基産地とし、東南アジアに分布するもので、我が国からは、奄美大島のアマミトゲネズミ、及び土壤中から *R. sawaii* Suzuki, 1975 1種だけが知られており、本種が2番目の記録である。

今回記載した新種の他に、土壤中から *Leptotrombidium (L.) pallidum burnsei* (Sasa et al, 1950) 2個体 *Euschengastia (E.) sp.* 2個体、クマネズミから *L. (L.) kawamurai* (Fukuzumi et Obata, 1953) 25個体が採集された。

また、オオミズナギドリの巣坑道の土壤中から、ヒメダニ科、*Ornithodoros (A.) sawaii* Kitaoka et Suzuki, 1973 43個体が採集された。

これら男女群島の恙虫は、これまでに南西諸島で採集された恙虫相に一致し、男女群島に近い五島列島産の恙虫相が九州本土産のものと一致するのに比べて、特徴的である。*O. sawaii* も南西諸島の奄美大島の無人島にあるオオミズナギドリの巣穴からだけ採集されているので、男女群島の吸血性ダニ類が特異的な様相を示すものとして注目される。

熱帯医学 第21巻 第2号 57-62頁, 1979年8月